RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/556,938_

Source: _PCT/10_

Date Processed by STIC: _11/25/05_

ENTERED

PCT

RAW SEQUENCE LISTING DATE: 11/25/2005
PATENT APPLICATION: US/10/556,938 TIME: 12:06:43

Input Set : **A:\EX04-037patentin.txt**
Output Set: **N:\CRF4\11252005\J556938.raw**

```
 3 <110> APPLICANT: EXELIXIS, INC.
 5 <120> TITLE OF INVENTION: RANBP2 AS MODIFIER OF THE PTEN/IGF PATHWAY AND METHODS OF
USE
 7 <130> FILE REFERENCE: EX04-037
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/556,938
C--> 9 <141> CURRENT FILING DATE: 2005-11-10
 9 <150> PRIOR APPLICATION NUMBER: US 60/470,766
10 <151> PRIOR FILING DATE: 2003-05-14
12 <160> NUMBER OF SEQ ID NOS: 7
14 <170> SOFTWARE: PatentIn version 3.2
16 <210> SEQ ID NO: 1
17 <211> LENGTH: 10697
18 <212> TYPE: DNA
19 <213> ORGANISM: Homo sapiens
21 <400> SEQUENCE: 1
22 cacagtggtc ctccgccggc tacggcgctg cgtcactggt ttgcaggcgc tttcctcttg      60
24 gaagtggcga ctgctgcggg cctgagcgct ggtctcacgc gcctcgggag ccaggttggc     120
26 ggcgcgatga ggcgcagcaa ggctgacgtg gagcggtaca tcgcctcggt gcagggctcc     180
28 accccgtcgc ctcgacagaa gtcaatgaaa ggattctatt ttgcaaagct gtattatgaa     240
30 gctaaagaat atgatcttgc taaaaaatac atatgtactt acattaatgt gcaagagagg     300
32 gatcccaaag ctcacagatt tctgggtctt ctttatgaat tggaagaaaa cacagacaaa     360
34 gccgttgaat gttacaggcg ttcagtggaa ttaaacccaa cacaaaaaga tcttgtgttg     420
36 aagattgcag aattgctttg taaaaatgat gttactgatg gaagagcaaa atactggctt     480
38 gaaagagcag ccaaactttt cccaggaagt cctgcaattt ataaactaaa ggaacagctt     540
40 ctagattgtg aaggtgaaga tggatggaat aaactttttg acttgattca gtcagaactt     600
42 tatgtaagac ctgatgacgt ccatgtgaac atccggctag tggaggtgta tcgctcaact     660
44 aaaagattga aggatgctgt ggcccactgc catgaggcag agaggaacat agctttgcgt     720
46 tcaagtttag aatggaattc gtgtgttgta cagaccctta aggaatatct ggagtcttta     780
48 cagtgtttgg agtctgataa aagtgactgg cgagcaacca atacagactt actgctggcc     840
50 tatgctaatc ttatgcttct tacgctttcc actagagatg tgcaggaaag tagagaatta     900
52 ctgcaaagtt ttgatagtgc tcttcagtct gtgaaatctt gggtggaaa tgatgaactg     960
54 tcagctactt tcttagaaat gaaaggacat ttctacatgc atgctggttc tctgcttttg    1020
56 aagatgggtc agcatagtag taatgttcaa tggcgagctc tttctgagct ggctgcattg    1080
58 tgctatctca tagcatttca ggttccaaga ccaaagatta aattaataaa aggtgaagct    1140
60 ggacaaaatc tgctggaaat gatggcctgt gaccgactga gccaatcagg cacatgttg    1200
62 ctaaacttaa gtcgtggcaa gcaagatttt ttaaaagaga ttgttgaaac ttttgccaac    1260
64 aaaagcgggc agtctgcatt atatgatgct ctgttttcta gtcagtcacc taaggataca    1320
66 tcttttcttg gtagcgatga tattggaaac attgatgtac gagaaccaga gcttgaagat    1380
68 ttgactagat acgatgttgg tgctattcga gcacataatg gtagtcttca gcaccttact    1440
70 tggcttggct tacagtggaa ttcattgcct gctttacctg gaatccgaaa atggctaaaa    1500
72 cagctttcc atcatttgcc ccatgaaacc tcaaggcttg aaacaaatgc acctgaatca    1560
74 atatgtattt tagatcttga agtatttctc cttggagtag tatataccag ccacttacaa    1620
76 ttaaaggaga aatgtaattc tcaccacagc tcctatcagc cgttatgcct gcccttcct    1680
78 gtgtgtaaac agctttgtac agaaagacaa aaatcttggt gggatgcggt ttgtactctg    1740
```

```
 80 attcacagaa aagcagtacc tggaaacgta gcaaaattga gacttctagt tcagcatgaa 1800
 82 ataaacactc taagagccca ggaaaaacat ggccttcaac ctgctctgct tgtacattgg 1860
 84 gcagaatgcc ttcagaaaac gggcagcggt cttaattctt tttatgatca acgagaatac 1920
 86 atagggagaa gtgttcatta ttggaagaaa gttttgccat tgttgaagat aataaaaaag 1980
 88 aagaacagta ttcctgaacc tattgatcct ctgtttaaac attttcatag tgtagacatt 2040
 90 caggcatcag aaattgttga atatgaagaa gacgcacaca taacttttgc tatattggat 2100
 92 gcagtaaatg gaaatataga agatgctgtg actgcttttg aatctataaa aagtgttgtt 2160
 94 tcttattgga atcttgcact gattttttcac aggaaggcag aagacattga aaatgatgcc 2220
 96 ctttctcctg aagaacaaga agaatgcaaa aattatctga gaaagaccag ggactaccta 2280
 98 ataaagatta tagatgacag tgattcaaat ctttcagtgg tcaagaaatt gcctgtgccc 2340
100 ctggagtctg taaaagagat gcttaattca gtcatgcagg aactcgaaga ctatagtgaa 2400
102 ggaggtcctc tctataaaaa tggttctttg cgaaatgcag attcagaaat aaaacattct 2460
104 acaccgtctc ctaccaaata ttcactatca ccaagtaaaa gttacaagta ttctcccaaa 2520
106 acaccacctc gatgggcaga agatcagaat tctttactga aaatgatttg ccaacaagta 2580
108 gaggccatta agaaagaaat gcaggagttg aaactaaata gcagtaactc agcatcccct 2640
110 catcgttggc ccacagagaa ttatggacca gactcggtgc ctgatggata tcaggggtca 2700
112 cagacatttc atggggctcc actaacagtt gcaactactg gcccttcagt atattatagt 2760
114 cagtcaccag catataattc ccagtatctt ctcagaccag cagctaatgt tactcccaca 2820
116 aagggcccag tctatggcat gaataggctt ccaccccaac agcatattta tgcctatccg 2880
118 caacagatgc acacaccgcc agtgcaaagc tcatctgctt gtatgttctc tcaggagatg 2940
120 tatggtcctc ctgcattgcg ttttgagtct cctgcaacgg gaattctatc gcccaggggt 3000
122 gatgattact ttaattacaa tgttcaacag acaagcacaa atccaccttt gccagaacca 3060
124 ggatatttca caaaacctcc gattgcagct catgcttcaa gatctgcaga atctaagact 3120
126 atagaatttg ggaaaactaa ttttgttcag cccatgccgg gtgaaggatt aaggccatct 3180
128 ttgccaacac aagcacacac aacacagcca actccttta aatttaactc aaatttcaaa 3240
130 tcaaatgatg gtgacttcac gttttcctca ccacaggttg tgacacagcc ccctcctgca 3300
132 gcttacagta acagtgaaag cctttttaggt ctcctgactt cagataaacc cttgcaagga 3360
134 gatggctata gtggagccaa accaattcct ggtggtcaaa ccattgggcc tcgaaataca 3420
136 ttcaatttg gaagcaaaaa tgtgtctgga atttcattta cagaaaacat ggggtcgagt 3480
138 cagcaaaaga attctggttt tcggcgaagt gatgatatgt ttactttcca tggtccaggg 3540
140 aaatcagtat ttggaacacc cactttagag acagcaaaca agaatcatga dacagatgga 3600
142 ggaagtgccc atggggatga tgatgatgac ggtcctcact ttgagcctgt agtacctctt 3660
144 cctgataaga ttgaagtaaa aactggtgag gaagatgaag aagaattctt ttgcaaccgc 3720
146 gcgaaattgt ttcgtttcga tgtagaatcc aaagaatgga agaacgtgg gattggcaat 3780
148 gtaaaaatac tgaggcataa aacatctggt aaaattcgcc ttctaatgag acgagagcaa 3840
150 gtattgaaaa tctgtgcaaa tcattacatc agtccagata tgaaattgac accaaatgct 3900
152 ggatcagaca gatcttttgt atggcatgcc cttgattatg cagatgagtt gccaaaacca 3960
154 gaacaacttg ctattaggtt caaaactcct gaggaagcag cactttttaa atgcaagttt 4020
156 gaagaagccc agagcatttt aaaagcccca ggaacaaatg tagccatggc gtcaaatcag 4080
158 gctgtcagaa ttgtaaaaga acccacaagt catgataaca aggatatttg caaatctgat 4140
160 gctggaaacc tgaattttga atttcaggtt gcaaagaaag aagggtcttg gtggcattgt 4200
162 aacagctgct cattaaagaa tgcttcaact gctaagaaat gtgtatcatg ccaaaatcta 4260
164 aacccaagca ataaagagct cgttggccca ccattagctg aaactgtttt tactcctaaa 4320
166 accagcccag agaatgttca agatcgattt gcattggtga ctccaaagaa agaaggtcac 4380
168 tgggattgta gtatttgttt agtaagaaat gaacctactg tatctaggtg cattgcgtgt 4440
170 cagaatacaa aatctgctaa caaaagtgga tcttcatttg ttcatcaagc ttcatttaaa 4500
172 tttggccagg gagatcttcc taaacctatt aacagtgatt tcagatctgt tttttctaca 4560
174 aaggaaggac agtgggattg cagtgcatgt ttggtacaaa atgaggggag ctctacaaaa 4620
176 tgtgctgctt gtcagaatcc gagaaaacag agtctacctg ctacttctat tccaacacct 4680
```

```
178 gcctctttta agtttggtac ttcagagaca agtaaaactc taaaaagtgg atttgaagac 4740
180 atgtttgcta agaaggaagg acagtgggat tgcagttcat gcttagtgcg aaatgaagca 4800
182 aatgctacaa gatgtgttgc ttgtcagaat ccggataaac caagtccatc tacttctgtt 4860
184 ccagctcctg cctcttttaa gtttggtact tcagagacaa gcaaggctcc aaagagcgga 4920
186 tttgagggaa tgttcactaa gaaggaggga cagtgggatt gcagtgtgtg cttagtaaga 4980
188 aatgaagcca gtgctaccaa atgtattgct tgtcagaatc caggtaaaca aaatcaaact 5040
190 acttctgcag tttcaacacc tgcctcttca gagacaagca aggctccaaa gagcggattt 5100
192 gagggaatgt tcactaagaa ggagggacag tgggattgca gtgtgtgctt agtaagaaat 5160
194 gaagccagtg ctaccaaatg tattgcttgt cagaatccag gtaaacaaaa tcaaactact 5220
196 tctgcagttt caacacctgc ctcttcagag acaagcaagg ctccaaagag cggatttgag 5280
198 ggaatgttca ctaagaagga aggacagtgg gattgcagtg tgtgcttagt aagaaatgaa 5340
200 gccagtgcta ccaaatgtat tgcttgtcag tgtccaagta aacaaaatca aacaactgca 5400
202 atttcaacac ctgcctcttc ggagataagc aaggctccaa agagtggatt tgaaggaatg 5460
204 ttcatcagga aaggacagtg ggattgtagt gtttgctgtg tacaaaatga gagttcttcc 5520
206 ttaaaatgtg tggcttgtga tgcctctaaa ccaactcata aacctattgc agaagctcct 5580
208 tcagctttca cactgggctc agaaatgaag ttgcatgact cttctggaag tcaggtggga 5640
210 acaggattta aaagtaattt ctcagaaaaa gcttctaagt ttggcaatac agagcaagga 5700
212 ttcaaatttg ggcatgtgga tcaagaaaat tcaccttcat ttatgtttca gggttcttct 5760
214 aatacagaat ttaagtcaac caaagaagga ttttccatcc ctgtgtctgc tgatggattt 5820
216 aaatttggca tttcggaacc aggaaatcaa gaaaagaaaa gtgaaaagcc tcttgaaaat 5880
218 ggtactggct tccaggctca ggatattagt ggccagaaga atggccgtgg tgtgattttt 5940
220 ggccaaacaa gtagcacttt tacatttgca gatcttgcaa aatcaacttc aggagaagga 6000
222 tttcagtttg gcaaaaaaga ccccaatttc aagggatttt caggtgctgg agaaaaatta 6060
224 ttctcatcac aatacggtaa aatggccaat aaagcaaaca cttccggtga ctttgagaaa 6120
226 gatgatgatg cctataagac tgaggacagc gatgacatcc attttgaacc agtagttcaa 6180
228 atgcccgaaa aagtagaact tgtaacagga gaagaagatg aaaaagttct gtattcacag 6240
230 cgggtaaaac tatttagatt tgatgctgag gtaagtcagt ggaaagaaag gggcttgggg 6300
232 aacttaaaaa ttctcaaaaa cgaggtcaat ggcaaactaa gaatgctgat gcgaagagaa 6360
234 caagtactaa aagtgtgtgc taatcattgg ataacgacta cgatgaacct gaagcctctc 6420
236 tctggatcag atagagcatg gatgtggtta gccagtgatt tctctgatgg tgatgccaaa 6480
238 ctagagcagt tggcagcaaa atttaaaaca ccagagctgg ctgaagaatt caagcagaaa 6540
240 tttgaggaat gccagcggct tctgttagac ataccacttc aaactcccca taaacttgta 6600
242 gatactggca gagctgccaa gttaatacag agagctgaag aaatgaagag tggactgaaa 6660
244 gatttcaaaa cattttttgac aaatgatcaa acaaaagtca ctgaggaaga aaataagggt 6720
246 tcaggtacag gtgcggccgg tgcctcagac acaacaataa aacccaatcc tgaaaacact 6780
248 gggcccacat tagaatggga taactatgat ttaagggaag atgctttgga tgatagtgtc 6840
250 agtagtagct cagtacatgc ttctccattg gcaagtagcc ctgtgagaaa aaatcttttc 6900
252 cgttttggtg agtcaacaac aggatttaac ttcagtttta aatctgcttt gagtccatct 6960
254 aagtctcctg ccaagttgaa tcagagtggg acttcagttg gcactgatga agaatctgat 7020
256 gttactcaag aagaagagag agatggacag tactttgaac ctgttgttcc tttacctgat 7080
258 ctagttgaag tatccagtgg tgaggaaaat gaacaagttg tttttagtca cagggcaaaa 7140
260 ctctacagat atgataaaga tgttggtcaa tggaaagaaa ggggcattgg tgatataaag 7200
262 attttacaga attatgataa taagcaagtt cgtatagtga tgagaaggga ccaagtatta 7260
264 aaactttgtg ccaatcacag aataactcca gacatgactt tgcaaaatat gaaagggaca 7320
266 gaaagagtat ggttgtggac tgcatgtgat tttgcagatg gagaaagaaa agtagagcat 7380
268 ttagctgttc gtttttaaact acaggatgtt gcagactcgt ttaagaaaat ttttgatgaa 7440
270 gcaaaaacag cccaggaaaa agattctttg ataacacctc atgtttctcg gtcaagcact 7500
272 cccagagagt caccatgtgg caaaattgct gtagctgtat tagaagaaac cacaagagag 7560
274 aggacagatg ttattcaggg tgatgatgta gcagatgcaa cttcagaagt tgaagtgtct 7620
```

```
276 agcacatctg aaacaacacc aaaagcagtg gtttctcctc caaagtttgt atttggttca  7680
278 gagtctgtta aaagcatttt tagtagtgaa aaatcaaaac catttgcatt cggcaacagt  7740
280 tcagccactg ggtctttgtt tggatttagt tttaatgcac ctttgaaaag taacaatagt  7800
282 gaaactagtt cagtagccca gagtggatct gaaagcaaag tggaacctaa aaaatgtgaa  7860
284 ctgtcaaaga actctgatat cgaacagtct tcagatagca aagtcaaaaa tctctttgct  7920
286 tcctttccaa cggaagaatc ttcaatcaac tacacattta aaacaccaga aaaggcaaaa  7980
288 gagaagaaaa aacctgaaga ttctccctca gatgatgatg ttctcattgt atatgaacta  8040
290 actccaaccg ctgagcagaa agcccttgca accaaactta aacttcctcc aactttcttc  8100
292 tgctacaaga atagaccaga ttatgttagt gaagaagagg aggatgatga agatttcgaa  8160
294 acagctgtca agaaacttaa tggaaaacta tatttggatg gctcagaaaa atgtagaccc  8220
296 ttggaagaaa atacagcaga taatgagaaa gaatgtatta ttgtttggga aaagaaacca  8280
298 acagttgaag agaaggcaaa agcagatacg ttaaaacttc cacctacatt ttttgtgga  8340
300 gtctgtagtg atactgatga agacaatgga aatggggaag actttcaatc agagcttcaa  8400
302 aaagttcagg aagctcaaaa atctcagaca gaagaaataa ctagcacaac tgacagtgta  8460
304 tatacaggtg ggactgaagt gatggtacct tctttctgta aatctgaaga acctgattct  8520
306 attaccaaat ccattagttc accatctgtt tcctctgaaa ctatggacaa acctgtagat  8580
308 ttgtcaacta gaaaggaaat tgatacagat tctacaagcc aaggggaaag caagatagtt  8640
310 tcatttggat ttggaagtag cacagggctc tcatttgcag acttggcttc cagtaattct  8700
312 ggagattttg cttttggttc taaagataaa aatttccaat gggcaaatac tggagcagct  8760
314 gtgtttggaa cacagtcagt cggaacccag tcagccggta aagttggtga agatgaagat  8820
316 ggtagtgatg aagaagtagt tcataatgaa gatatccatt ttgaaccaat agtgtcacta  8880
318 ccagaggtag aagtaaaatc tggagaagaa gatgaagaaa ttttgtttaa agagagagcc  8940
320 aaactttata gatgggatcg ggatgtcagt cagtggaagg agcgcggtgt tggagatata  9000
322 aagattcttt ggcatacaat gaagaattat taccggatcc taatgagaag agaccaggtt  9060
324 tttaaagtgt gtgcaaacca cgttattact aaaacaatgg aattaaagcc cttaaatgtt  9120
326 tcaaataatg ctttagtttg gactgcctca gattatgctg atggagaagc aaaagtagaa  9180
328 cagcttgcag tgagatttaa aactaaagaa gtagctgatt gtttcaagaa aacatttgaa  9240
330 gaatgtcagc agaatttaat gaaactccag aaaggacatg tatcactggc agcagaatta  9300
332 tcaaaggaga ccaatcctgt ggtgtttttt gatgtttgtg cggacggtga acctctaggg  9360
334 cggataacta tggaattatt ttcaaacatt gttcctcgga ctgctgagaa cttcagagca  9420
336 ctatgcactg gagagaaagg ctttggtttc aagaattcca tttttcacag agtaattcca  9480
338 gattttgttt gccaaggagg agatatcacc aaacatgatg gaacaggcgg acagtccatt  9540
340 tatggagaca aatttgaaga tgaaaatttt gatgtgaaac atactggtcc tggtttacta  9600
342 tccatggcca atcaaggcca gaataccaat aattctcaat ttgttataac actgaagaaa  9660
344 gcagaacatt tggactttaa gcatgtagta tttgggtttg ttaaggatgg catggatact  9720
346 gtgaaaaaga ttgaatcatt tggttctccc aaagggtctg tttgtcgaag aataactatc  9780
348 acagaatgtg gacagatata aaatcattgt tgttcataga aaatttcatc tgtataagca  9840
350 gttggattga gcttagcta ttacaatttg atagttatgt tcagcttttg aaaatggacg  9900
352 tttccgattt acaaatgtaa aattgcagct tatagctgtt gtcactttt aatgtgttat  9960
354 aattgacctt gcatggtgtg aaataaaagt ttaaacactg gtgatttcag gtgtacttgt 10020
356 gtttatgtac tcctgacgta ttaaaatgga ataatactaa tcttgttaaa agcaatagac 10080
358 ctcaaactat tgaaggaata tgatatatgc aatttaattt taattccttt taagatattt 10140
360 ggacttcctg catggatata cttaccattt gaataaaggg accacaactt ggataattta 10200
362 attttaggtt tgaaatatat ttggtaatct taactattgg tgtactcatt tatgcataga 10260
364 gactcgttta tgaatgggta gagccacaga acgtatagag ttaaccaaag tgctcttctc 10320
366 tagaatcttt acacctcctg tgtggttaca agttaacttt gtaagtagcg taccttcctt 10380
368 ccttaaaata tctagcttcc tgtgcccttt catagatatt cgattaattt ttacatttta 10440
370 aacaagttga ctatttcctt taggggtttt gtttcaaact tttctgtcat ctgtctctac 10500
372 tacctcagaa actgcagctt ggttctgatg atagaaattg aattttcct tgtagttatt 10560
```

```
374 gtgataaagt atgaatattt ttagaaagtc tataccatgt tctttcgtta aagatttgct  10620
376 ttatacaaga ttgttgcagt acctttttct ggtaaatttt gtagcagaaa taaaatgaca  10680
378 attcctaaga gccaaaa                                                  10697
381 <210> SEQ ID NO: 2
382 <211> LENGTH: 10005
383 <212> TYPE: DNA
384 <213> ORGANISM: Homo sapiens
386 <400> SEQUENCE: 2
387 acacagtggt cctccgccgg ctacggcgct gcgtcactgg tttgcaggcg ctttcctctt    60
389 ggaagtggcg actgctgcgg gcctgagcgc tggtctcacg cgcctcggga gccaggttgg   120
391 cggcgcgatg aggcgcagca aggctgacgt ggagcggtac atcgcctcgg tgcagggctc   180
393 caccccgtcg cctcgacaga agtcaatgaa aggattctat tttgcaaagc tgtattatga   240
395 agctaaagaa tatgatcttg ctaaaaaata catatgtact tacattaatg tgcaagagag   300
397 ggatcccaaa gctcacagat ttctgggtct tctttatgaa ttggaagaaa acacagacaa   360
399 agccgttgaa tgttacaggc gttcagtgga attaaaccca acacaaaaag atcttgtgtt   420
401 gaagattgca gaattgcttt gtaaaaatga tgttactgat ggaagagcaa aatactggct   480
403 tgaaagagca gccaaacttt tcccaggaag tcctgcaatt tataaactaa aggaacagct   540
405 tctagattgt gaaggtgaag atggatggaa taaacttttt gacttgattc agtcagaact   600
407 ttatgtaaga cctgatgacg tccatgtgaa catccggcta gtggaggtgt atcgctcaac   660
409 taaaagattg aaggatgctg tggcccactg ccatgaggca gagaggaaca tagctttgcg   720
411 ttcaagttta gaatggaatt cgtgtgttgt acagacctt aaggaatatc tggagtcttt   780
413 acagtgtttg gagtctgata aaagtgactg gcgagcaacc aatacagact tactgctggc   840
415 ctatgctaat cttatgcttc ttacgctttc cactagagat gtgcaggaaa gtagagaatt   900
417 actgcaaagt tttgatagtg ctcttcagtc tgtgaaatct ttgggtggaa atgatgaact   960
419 gtcagctact ttcttagaaa tgaaaggaca tttctacatg catgctggtt ctctgctttt  1020
421 gaagatgggt cagcatagta gtaatgttca atggcgagct ctttctgagc tggctgcatt  1080
423 gtgctatctc atagcatttc aggttccaag accaaagatt aaattaataa aaggtgaagc  1140
425 tggacaaaat ctgctggaaa tgatggcctg tgaccgactg agccaatcag ggcacatgtt  1200
427 gctaaactta agtcgtggca agcaagattt tttaaaagag attgttgaaa cttttgccaa  1260
429 caaaagcggg cagtctgcat tatatgatgc tctgttttct agtcagtcac ctaaggatac  1320
431 atcttttctt ggtagcgatg atattggaaa cattgatgta cgagaaccag agcttgaaga  1380
433 tttgactaga tacgatgttg gtgctattcg agcacataat ggtagtcttc agcaccttac  1440
435 ttggcttggc ttacagtgga attcattgcc tgctttacct ggaatccgaa aatggctaaa  1500
437 acagcttttc catcatttgc cccatgaaac ctcaaggctt gaaacaaatg cacctgaatc  1560
439 aatatgtatt ttagatcttg aagtatttct ccttggagta gtatatacca gccacttaca  1620
441 attaaaggag aaatgtaatt ctcaccacag ctcctatcag ccgttatgcc tgcccttcc  1680
443 tgtgtgtaaa cagctttgta cagaaagaca aaaatcttgg tgggatgcgg tttgtactct  1740
445 gattcacaga aaagcagtac ctggaaacgt agcaaaattg agacttctag ttcagcatga  1800
447 aataaacact ctaagagccc aggaaaaaca tggccttcaa cctgctctgc ttgtacattg  1860
449 ggcagaatgc cttcagaaaa cgggcagcgg tcttaattct ttttatgatc aacgagaata  1920
451 catagggaga agtgttcatt attggaagaa agttttgcca ttgttgaaga taataaaaaa  1980
453 gaagaacagt attcctgaac ctattgatcc tctgtttaaa cattttcata gtgtagacat  2040
455 tcaggcatca gaaattgttg aatatgaaga agacgcacac ataacttttg ctatattgga  2100
457 tgcagtaaat ggaaatatag aagatgctgt gactgctttt gaatctataa aaagtgttgt  2160
459 ttcttattgg aatcttgcac tgatttttca caggaaggca gaagacattg aaaatgatgc  2220
461 cctttctcct gaagaacaag aagaatgcaa aaattatctg agaaagacca gggactacct  2280
463 aataaagatt atagatgaca gtgattcaaa tctttcagtg gtcaagaaat tgcctgtgcc  2340
465 cctggagtct gtaaaagaga tgcttaattc agtcatgcag gaactcgaag actatagtga  2400
467 aggaggtcct ctctataaaa atggttcttt gcgaaatgca gattcagaaa taaaacattc  2460
```

VERIFICATION SUMMARY DATE: 11/25/2005
PATENT APPLICATION: **US/10/556,938** TIME: 12:06:44

Input Set : **A:\EX04-037patentin.txt**
Output Set: **N:\CRF4\11252005\J556938.raw**

L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date